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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,633	07/17/2007	Karl-Hermann Schmidt	4111.04US01	3185

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EXAMINER	
CHUNDURU, SURYAPRABHA	
ART UNIT	PAPER NUMBER
1637	

MAIL DATE	DELIVERY MODE
12/17/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/591,633	SCHMIDT ET AL.	
	Examiner	Art Unit	
	Suryaprabha Chunduru	1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *9/27/10*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19, 21-23, 26-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-19, 21-23, 26-29* is/are rejected.

7)☒ Claim(s) *2* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *9/5/06* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The Applicants' response to the office action filed on September 27, 2010 has been considered and acknowledged.

Status of the application

2. Claims 1-19, 21-23, 26-29 are pending under examination. Claims 20, 24-25 are cancelled. Applicants' arguments and the amendment were fully considered and found persuasive for the reasons that follows. This action is made Non-Final.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-19, 21-23, 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cross et al. (Nature Genetics, Vol. 6, No. 3, pp. 236-244, 1994) in view of Wiemann (WO 2001/12659).

Cross et al. teach a method of claim 1, 3, 27, of separating and enriching prokaryotic DNA comprising

(a) contacting at least one prokaryotic DNA (plasmid DNA), present in a solution, with a protein (methyl-CpG binding protein) which binds to prokaryotic DNA, recognizes non-methylated CpG motifs, thereby forming a protein-DNA complex (see page 236, col. 2, paragraph 1-2 under the sub-title fractionation of DNA using an MBD column);

(b) separating said complex (see page 237, col. 1, line 1-9).

With regard to claim 4, Cross et al. teach that the separation is followed by separation of DNA from the protein of the complex (see page 237, col. 1, line 1-9).

With regard to claim 5-12, 14, Cross et al. teach that the protein is bound directly to a carrier and the carrier is a matrix or an antibody or antiserum (see page 236, col. 2, paragraph 1-2 under the sub-title fractionation of DNA using an MBD column, page 237, col. 1, line 1-9).

With regard to claim 13, Cross et al. teach that the separation is effected by means of electrophoresis (see page 237, col. 1, line 1-9).

With regard to claim 15-16, Cross et al. teach that the solution contains a mixture of prokaryotic and eukaryotic DNA and the prokaryotic DNA is bacterial DNA (see page 239, col. 2, paragraph under preparation of a CpG island library, page 249, col. 2, paragraph 1-4).

With regard to claim 17, 26, Cross et al. teach that the solution is derived from body fluid comprises cell preparation from blood (see page 238, Fig. 3).

With regard to claim 18-19, Cross et al. teach that the separation is achieved by means of a filter matrix upon which the protein is immobilized (see page 236, col. 2, paragraph 1-2 under the sub-title fractionation of DNA using an MBD column).

With regard to claims 21-23, Cross et al. teach isolating DNA from the DNA-protein complex, amplifying by PCR and cloning the DNA into vectors (see page 243, col. 2, paragraphs 1-4, page 238, col. 2, paragraph 1-2).

With regard to claim 28-29, Cross et al. teach diagnosis of cancer having specific methylation pattern (see page 242, col. 2, paragraph 1).

Although Cross et al. teach the use of CGBP protein, however, Cross et al. did not teach the sequence partial homology to SEQ ID No. 2.

Wiemann teaches the protein sequence of CGBP comprising partial homology (99.5%) as disclosed below.

ID ABU53239 standard; protein; 656 AA.
AC ABU53239;
DT 15-JUN-2007 (revised)
DT 14-APR-2003 (first entry)
DE Human testes-derived protein from DKFZphtes3_4f17.
KW Human; gene therapy; vaccine; disease treatment; detection; BOND_PC;
KW CXXC finger 1 (PHD domain), isoform CRA_a;
KW CXXC finger 1 (PHD domain), isoform CRA_a [Homo sapiens];
KW hypothetical protein; hypothetical protein [Homo sapiens];
KW CXXC finger 1 (PHD domain); CXXC finger 1 (PHD domain) [Homo sapiens];
KW protein containing CXXC domain 1;
KW protein containing CXXC domain 1 [Homo sapiens]; CXXC finger 1;
KW CXXC finger 1 [synthetic construct];
KW CXXC finger 1 (PHD domain) [synthetic construct]; GO3677; GO5515; GO5634;
KW GO6350; GO6355; GO8270; GO16363; GO16563; GO16607; GO45322; GO46872.
OS Homo sapiens.
PN WO200112659-A2.
PD 22-FEB-2001.
PF 18-AUG-2000; 2000WO-IB001496.
PR 18-AUG-1999; 99US-0149499P.
PR 28-SEP-1999; 99US-0156503P.
PA (GEHU-) GERMAN HUMAN GENOME PROJECT.
PI Wiemann S;
DR WPI; 2001-327840/34.
DR N-PSDB; ABX71405.
DR PC:NCBI; gi20138037.
DR PC:SWISSPROT; Q9P0U4.
PT Nucleic acids having the sequences of clones isolated from libraries of
PT different human tissues, useful in recombinant DNA methodologies.
PS Claim 21; Page 877; 1095pp; English.

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SQ   Sequence 656 AA;

 Query Match          99.5%;  Score 968;  DB 1;  Length 656;
 Best Local Similarity  99.4%;
 Matches  180;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GGGRKRPVPDPNLQRRAGSGTGVGAMLARGSASPHKSSPQPLVATPSQHHQQQQQQIKRS 60
           |||||||||:|||||||||||||||||||||||||||||||||||||||||||||||||||
Db     106 GGGRKRPVPDPDLQRRAGSGTGVGAMLARGSASPHKSSPQPLVATPSQHHQQQQQQIKRS 165

Qy      61 ARMCGECEACRRTEDCGHCDFCRDMKKFGGPNKIRQKCRLRQCQLRARESYKYFPSSLSP 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     166 ARMCGECEACRRTEDCGHCDFCRDMKKFGGPNKIRQKCRLRQCQLRARESYKYFPSSLSP 225

Qy     121 VTPSESLPRPRRPLPTQQQPQPSQKLGRIREDEGAVASSTVKEPPEATATPEPLSDEDLP 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     226 VTPSESLPRPRRPLPTQQQPQPSQKLGRIREDEGAVASSTVKEPPEATATPEPLSDEDLP 285

Qy     181 L 181
           |
Db     286 L 286
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It would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of separating and enriching prokaryotic DNA as taught by Cross et al. with the use of a protein sequence having identity to SEQ ID No. 2 as taught by Wiemann for the purpose of developing a sensitive and efficient method for enriching the prokaryotic DNA. One skilled in the art would have motivated to combine the references because the ordinary artisan would have a reasonable expectation of success that the combination would result in a simple, efficient method for profiling assays because Wiemann explicitly taught that the protein is used in profiling assays (see page 1, abstract) and such a modification of the method would be obvious over the cited prior art.

Response to Arguments:

4. The objection to the specification is withdrawn herein in view of the amendment.

5. The rejection of claims 1, 4-6, 10, 12-19, 26-29 under 35 USC 102(b) as being anticipated by Vijg et al., is withdrawn herein in view of the persuasive arguments.

6. The rejection of claims 1-14, 21-23 under 35 USC 102(e) as being anticipated by Bird et al., is withdrawn herein in view of the submission of the English translation of the foreign priority documents.

Allowable Subject Matter

7. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suryaprabha Chunduru whose telephone number is 571-272-0783. The examiner can normally be reached on 8.30A.M. - 4.30P.M, Mon - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Suryaprabha Chunduru/
Primary Examiner, Art Unit 1637